Summary of Water Conditions
(Bulletin 120)
March 1, 2005
(See below for updates)

Long-range weather models continue to forecast above average precipitation for Central and Southern California, including much of the Southwest, and drier-than-average conditions in Northern California and the Pacific Northwest this spring. Temperatures are forecast to be above normal for almost all of California and all of the Pacific Northwest. The current low snowpack and a long-range outlook for below-normal precipitation and above-normal temperatures this spring have placed the Pacific Northwest at enhanced risk for drought development, notwithstanding recent heavy rains in some areas. In February, record low and near record low snowpack measurements were reported at several sites from Washington and Oregon eastward through western Montana. Further south, recent precipitation has somewhat decreased the extent and severity of the long-term drought across much of the interior West and Southwest setting the stage for increased streamflow into reservoirs during the spring. However, some large reservoirs on the Colorado River will likely take a long time, perhaps several years with normal precipitation, before storage returns to normal.

In California, February continued the storm pattern of previous months: heavy rains in the south and relatively dry in the north. It was very wet in Southern California the last half of February. A series of powerful storms moved across the south part of the State, bringing large amounts of precipitation and snow at the higher elevations. Heavy rainfall in the southern part of California produced significant streamflow, which exceeded flood stages on several rivers, and produced flash flooding and mudslides in the burn areas. The only significantly dry area of California is the northeastern portion of the State--the North Lahontan hydrologic region, which extends into the Klamath River basin in Oregon. In this region, reservoir storage is at 25 percent, due to low water levels in the region's biggest reservoir, Lake Tahoe. Forecast April through July streamflow in the upper Klamath River is only about 50% of average. As would be expected, this is tied in with the considerable lack of rainfall in the Pacific Northwest.

Except for northeastern region, the upper Klamath River basin, and the perennial supply problems on the San Joaquin Valley west side, an ample snowpack should ensure a good water supply year in most California basins. Snowpack water content is 135 percent of average compared to 125 percent last year. The snowpack is about 120 percent of the April 1 average, which is the normal date of maximum accumulation. Percentages are higher at the lower elevation snow courses, which may which may lead to some early runoff this year if temperatures warm up in March.

February precipitation ranged from about 135% of average in the San Joaquin Region to about 40% of average along the North Coast. The cumulative total since October 1 is around 105% of average in the Sacramento River region, 150% in the San Joaquin River region, and 135% in the Tulare Lake Basin.

The projected mean April-July basin runoff ranges from 137% of average in the Merced River basin to 78% of average in the Pit River basin. During February, the median Sacramento Valley Water Year Type remained at "Below Normal" and the San Joaquin Valley Water Year Type remained "Wet". February unimpaired runoff in the Sacramento River region was 54% of average, while the San Joaquin region was 109% of average. The cumulative Sacramento River region runoff since October 1 is 64% of average, compared to 94% a year ago. Meanwhile, the cumulative San Joaquin River region runoff since October 1 is 117% of average, compared to 53% a year ago.

March 15, 2005 (available 3/17)

This update includes the observed precipitation from March 1 through the 15th. The projected median April-July runoff now ranges from 129% (Merced River) to 73% (Feather River). This forecast is down an average of about 8% from our March 1st forecast. The Northern Sierra 8-Station Index gained 0.8" from March 1 to March 15, bringing the seasonal total up to 34.2", 90% of average for the date and about 19% behind last year's pace. These precipitation totals amount to about 12% of March's average and 68% of an average Water Year. The Unimpaired Runoff in the northern part of the state continues to track below normal and is currently (March 15) running at about 75% of the March average.

The only significantly dry area continues to be the northeastern portion of the State--the North Lahontan hydrologic region, which extends into the Klamath River basin in Oregon. In this region, on March 1, reservoir storage was at 25 percent of average, due to low water levels in the region's biggest reservoir, Lake Tahoe. Forecast April through July streamflow in the upper Klamath River is only about 50% of average. The Natural Resources Conservation Service has estimated the Klamath Basin snowpack to be 30 percent of normal for this time of year. The Oregon Governor has declared a state of drought emergency in Klamath County.

Drought has rapidly worsened across the Pacific Northwest from Washington and Oregon eastward to Montana, as mountain snow packs have dropped to record or near-record lows across the region. The Governor of Washington State has declared a statewide drought emergency, anticipating what weather forecasters predict will be the Pacific Northwest's worst dry spell in nearly three decades. Spring-summer water supply outlooks made in early March place this year's flows among the bottom one or two of the last 70 years. The water shortage is expected to hurt farmers, hydroelectric power production, fish production, irrigation and other sectors of the Washington's agribusiness economy — and has raised fears about an unusually bad fire season. Storms have continued decreased the extent and severity of the long-term drought across much of the Southwest and Great Basin, setting the stage for increased streamflow into reservoirs during the spring. However, some large reservoirs on the Colorado River, such as Mead and Powell, will likely take a long time, perhaps several years with normal precipitation, before storage returns to normal.

March 22, 2005 (available 3/24)

This update includes the observed precipitation from March 1 through the 22nd. The projected median April-July runoff now ranges from 139% (Merced River) to 83% (Feather River). This forecast is up an average of about 9% from the March 15th forecast. The March 1 through March 22 unimpaired runoff in the northern part of the state (American River northward) continues to track below normal. All other major rivers in the state, except for the Tule R, are flowing near or above the average for the first 22 days of March.

The latest NWS Climate Prediction Center long-range weather forecast maps at http://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead01/off_index.html suggest average precipitation for portions of Central and Southern California, including some of the American Southwest, and drier-than-average conditions in Northern California, parts of Central California, and southern Oregon this spring. Temperatures are forecast to be above normal for all of California and much of the Pacific Northwest.

The next Bulletin 120 forecast, for conditions on April 1, will be available by April 8.